

## Contact

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## Education

2019-2024

**Bachelor's of Applied Sciences  
in Management Engineering**

University of Waterloo

## Relevant Coursework

### MSCI 446: Machine Learning

- Unsupervised learning (clustering, Apriori)
- Supervised learning (regression, decision trees, Naïve Bayes, PRISM)
- Python

### MSCI 251/253: Probability and Statistics

- Random variables, sampling, confidence intervals, and hypothesis testing
- Distributions - Special discrete and continuous distributions (t, F, chi-square, Poisson)

### MSCI 245: Databases and Software Design

- Relational databases
- Demonstrated entity relationships with ERDs
- Built functional websites using Rails as the model-view-controller framework along with HTML/CSS and SQL

### MSCI 240: Algorithms and Data Structure

- Data structures (stack, queue, maps, sets, etc.)
- Analysis of time complexity using Big O notation.

# Joanna Yang

University of Waterloo

## Skills

- **Programming** - Python (pandas, sci-kit learn libraries), SQL, Java (object-oriented), Ruby/Rails, HTML/CSS
- **Data Visualization & Analysis Tools** - Tableau, Power BI, Excel
- **Methodologies** - Agile, Scrum, Waterfall, Six Sigma, Kaizen

## Work Experience

January 2023 - April 2023

### International Operations Business Analyst (Co-op/Intern) | Scotiabank

- Developed a dynamic dashboard in Power BI to report on the number of full-time employees and expenses, enabling management to make data-driven decisions regarding plan/actual variances, resource allocation, and cost control.

May 2022 - August 2022

### Business Improvement Analyst (Co-op/Intern) | J.D. Irving - Transportation

- Executed business improvement projects by creating workload distribution dashboards (Tableau), standardizing complex forms that allowed for data validations (Excel), and enhancing the orientation process for 6 businesses.

September 2021 - December 2021

### Business Analyst (Co-op/Intern) | Toyota Credit Canada Inc. (TCCI)

- Analyzed SMS data using SQL and Tableau to identify trends between customer payments and SMS, resulting in the discovery that customers receiving SMS made payments 1 week faster.
- Collaborated with US Toyota partners to ensure high data quality for presentation to stakeholders, including the collections department, VP Operations, and VP Risk Management.
- Extracted data on SMS, payment, and delinquency from Amazon Redshift.

January 2021 - April 2021

### Program Officer (Co-op/Intern) | Immigration Canada (IRCC)

- Analyzed compliance data of 300k+ international students using Excel, and designed a dashboard that provided a comprehensive comparison of pre-COVID and COVID compliance statuses to the Associate Deputy Minister.

## Projects

March 2023 - Present

### Student Mental Health Analysis | Python

- Investigating mental health data from students through visualizations and applying models such as decision trees to create predictions.

January 2022 - April 2022

### Predicting TED Talk Categories (MSCI 446 Term Project) | Python

- Predicted the categories of various TED Talks by applying text mining to transcripts using supervised learning models such as logistic regression and Naïve Bayes, with count vectorizer and TFIDF.